REMARKS

Claims 1-13 are present in the application, with claims 1-11 having been amended by the current response and new independent claims 12-13 having been added by the current amendment.

Claims 1-11 stand rejected.

Objection to Drawings Under 37 CFR 1.84(p)(5)

In the official action, the Examiner objected to the drawings by stating that Figures 6-7 should be designated by a legend such as--Prior Art--because only that which is old is illustrated. See MPEP § 608.02(g).

In response to the Examiner's objection, applicant has designated these figures as--prior art--, as suggested by the Examiner. Applicant believes such correction should obviate any objection that the Examiner may continue to have and an action acknowledging same is respectfully requested.

Objection to the Disclosure Under 37 CFR 1.84(p)(5)

In the official action, the Examiner objected to the disclosure by stating that paragraph [0002] fails to mention reference character 23 and figure 6, which appears to be the voice coil.

In response to the Examiner's objection, applicant has provided an amendment to paragraph [0002], as suggested by the Examiner. Applicant believes such corrections should obviate any objection to the Examiner may continue to have and an action acknowledging same is respectfully requested.

Rejections Under 35 USC §112, second paragraph

In the official action, claims 1 and 7 stand rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. In the rejection, the Examiner stated as follows:

> Claims 1 and 7 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.
>
> Claims 1 and 7 both claim "a front yoke... is loosely disposed between: an upper surface of a magnetic pole of said base yoke; and, said front yoke to provide a

necessary clearance between these yokes". It is unclear how the front yoke is disposed between the base yoke and itself. For the purposes of the art rejection below, "a front yoke... is loosely disposed between: an upper surface of a magnetic pole of said base yoke; and, said front yoke" will be interpreted as "a front yoke... is loosely disposed between: an upper surface of a magnetic pole of said base yoke; and, a half portion of the casing (10a)" as supported by Figures 4-5.

Claim 7 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

The last line of claim 7 states "said base yoke to have its peripheral edge supported by an inner surface of said casing" without previously mentioning a casing. For the purposes of the art rejection below, "said casing" will be interpreted as "a casing"

Applicant has extensively amended independent claims 1 and 7 and believes that such amendments have obviated the Examiner's rejections under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention and an action acknowledging same as respectively requested.

Rejections Under 35 USC §102 (b)

In the official action, the Examiner rejected claims 1-3, 5, 7-8, and 10 under 35 U.S.C. 102(b) as being anticipated by Hofer (US Patent 4,843,628 ('628)). In the official action, the examiner stated as follows:

Claims 1-3, 5, 7-8, and 10 are rejected under 35 U.S.C. 102(b) as being anticipated by Hofer (US Patent 4,843,628 ('628)).

Regarding claim 1**,** Hofer teaches a bone conduction device (inertial receiver; title) comprising: a base yoke (Fig. 2 #36) carrying both a voice coil (Fig. 2 #40) and a magnet (Fig. 2 #30); and, a front yoke (armature; Fig. 2 #16), which assumes a flat plate-like shape (Fig. 1 #16) and is loosely disposed between: an upper surface of a magnetic pole of said base yoke (#36); and, a half portion (Fig. 2 #12) of the casing (Fig. 2 #12,14) to provide a necessary clearance between these yokes (Fig. 2 between #34 and #18), wherein said device is characterized in that said clearance is produced by means of a resilient element (brass ring; Fig. 2 #22), which is disposed in an outer peripheral portion of said base yoke (#36) to receive said front yoke (#16) thereon *(via* #18).

Regarding claim 2, Hofer remains as applied above.

Hofer further teaches said base yoke (#36) being provided with a circular base (Fig. 1); and, said resilient element (#22) assumes an arcing shape (Fig. 1 *illustrates* #22 as *a circular component)* extending along said base (Fig. *2 illustrates #22 surrounding said base, connected via magnet #30).*

Regarding claim 3, Hofer remains as applied above.

Hofer further teaches said front yoke (armature; #16) being fixedly mounted in an inner surface of a casing without using any screw ("bonded by epoxy or the like to the interior of the closed end of the inner housing"; col. 2 lines 38-41).

Regarding claim 5, Hofer remains as applied above.

Hofer further teaches said magnet (#30) being disposed outside said voice coil (Fig. 2).

Regarding claim 7, Hofer teaches a bone conduction device (inertial receiver; title) comprising: a base yoke (Fig. 2 #36) carrying both a voice coil (Fig. 2 #40) and a magnet (Fig. 2 #30); and, a front yoke (armature; Fig. 2 #16), which assumes a flat plate-like shape (Fig. 1 #16) and is loosely disposed between: an upper surface of a magnetic pole of said base yoke (#36); and, a half portion (Fig. 2 #12) of the casing (Fig. 2 #12,14) to provide a necessary clearance between these yokes (Fig. 2 between #34 and #18), wherein said device is characterized in that said clearance is produced by means of a damper (brass ring; Fig. 2 #22), which is mounted on said base yoke (#36) to have its peripheral edge *(connected to magnet #30)* supported by an inner surface of a casing (Fig. 2 #12,14 *wherein the peripheral edge is supported by the inner surface of #14 via #38, #36, and #30).*

Regarding claim 8, Hofer remains as applied above.

Hofer further teaches said front yoke (armature; #16) being fixedly mounted on an inner surface of a casing without using any screw ("bonded by epoxy or the like to the interior of the closed end of the inner housing"; col. 2 lines 38-41).

Regarding claim 10**,** Hofer remains as applied above.

Hofer further teaches said magnet (#30) being disposed outside said voice coil (Fig. 2).

Prior to addressing the above, Applicant respectfully submits that the present disclosure is indeed novel and not obvious.

As stated in the specification, it is an object of the present disclosure to provide a bone conduction device, which is simple in construction, thin in thickness, small in leakage in magnetic flux and excellent in performance (see [0006]) .

In the present disclosure, the above object is accomplished by providing a bone conduction device comprising a base yoke 1 carrying both a voice coil 3 and a magnet 4; and a front yoke 5. The front yoke 5 is disposed so as to provide a necessary clearance between an upper surface of a magnetic pole of the base yoke 1 and the front yoke 5. The device is characterized in that the clearance is produced by a **resilient element**, which is disposed in an outer peripheral portion of the base yoke 1 to receive the front yoke 5 thereon (see [0007]). Such a bone conduction device meets the above objective in that the resulting bone conduction device is simple in construction, thin in thickness, small in leakage in magnetic flux, excellent in performance.

In short, the bone conduction speaker according to the present disclosure comprises only a

casing 10, the base yoke 1 being arranged in the casing 10 and carrying both the voice coil 3 and the magnet 4, the front yoke 5 disposed on an upper surface of the magnetic pole, and the resilient element 6 (or a damper 13) for producing the clearance. Clearly, this construction of the bone conduction device of the present disclosure is very simple and thin in thickness.

In contrast to the simple and thin device of the present disclosure described above, a transducer (10), as disclosed in Hofer, comprises: an inner housing (12) and outer housing (14); an armature (16) being bonded to the interior of the closed end of the inner housing (12); a spring diaphragm (18) sitting on a knife edge (20) and to which the armature (16) is spot welded; a damper pad (38) which in turn rests against the closed end of the outer housing (14); a magnetic pole piece (32) bonded on the damper pad (38); a coil (40) and a ring magnet (30) carried on the magnetic pole piece (32); and a brass ring (22) surrounding the outer surface of the ring magnet (30) and having a knife edge (20) on which the spring diaphragm (18) is set.

Apparently, as described immediately above, the construction of the relevant components of Hofer requires considerably more parts and is much more complicated than construction of the device disclosed in the present application. Thus, it is apparent that Hofer device could not solve the problems to be solved by the device as recited in the present claims.

In particular, we submit that the Examiner's assertion that "said clearance is produced by means of a resilient element (brass ring ; Fig.2#22) , which is disposed in an outer peripheral portion of said base yoke (#36) to receive said front yoke (#16) thereon (via#18) " is believed to be technically inaccurate. Specifically, because it is known that brass rings, like the brass ring (22) described in Hofer is hard and has no such resiliency, as required for the resilient element 6 recited in the present claims. In other words, if the of brass ring (22) were to be substituted for the resilient element 6 as recited in the present claims, it is respectably submitted that such device would not work for its intended purpose in its intended environment after such substitution. In that regard, Applicant respectfully submits that the present disclosure is indeed novel and not obvious.

As the examiner knows, in order to sustain an anticipation rejection, the Examiner must show that Hofer teaches each and every feature of the amended claims. Since the applied reference Hofer fails to teach a resilient element that ***provides*** a clearance between the front yoke and base yoke; the resilient element in Hofer does not come into contact with its "base yoke" as recited in the amended claims (see Fig.4). The resilient element, as recited in the amended claims, comes into contact with both the base yoke and the front yoke to provide the necessary clearance. Furthermore, the resilient

member of Hofer (the brass ring '22') does not contain an **insertion groove** to fixedly mount the peripheral portion of the base yoke, as currently recited in new independent claims 12 and 13.

As should be abundantly clear to the Examiner, the applied Hofer reference fails to disclose, suggest or teach each and every feature as currently recited in the amended claims and thus, the Examiner has failed to make a prima facie case of anticipation and an office action acknowledging same is respectably requested.

Rejections under 35 USC 103 (a)

In the present official action, the Examiner rejected Claims 6 and 11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hofer (US Patent 4,843,628 ('628))as follows:

> Claims 6 and 11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hofer (US Patent 4,843,628 ('628)).
>
> Regarding claim 6, Hofer remains as applied above.
>
> Hofer does not explicitly teach said magnet being disposed inside said voice coil.
>
> Examiner takes official notice that various designs of the magnetic circuit are well known in the art. Speaker systems routinely adjust the components of the magnetic circuit depending on the requirements of the design. Speaker systems using ring magnets, plate magnets, or plug magnets are all well known, and their respective performance characteristics are all well known. Placement of the magnet inside the voice coil would have been obvious, with a minimal amount of experimentation, to one of ordinary skill in the art at the time of the invention.
>
> It would have been obvious to one of ordinary skill in the art at the time of the invention to use a magnetic circuit design with the magnet disposed inside the voice coil on the device taught by Hofer, depending on the requirements of the design.
>
> Regarding claim 11, Hofer remains as applied above.
>
> Hofer does not explicitly teach said magnet being disposed inside said voice coil.

Regardless of the above, and solely to expedite prosecution without intending to alter the scope of the claims, Applicant has herein amended independent claims 1 and 7 to make explicit that which was implicit. Namely, independent claims 1 and 7 have been amended to recite that the bone conduction device is "...a front yoke disposed on an upper surface of a magnetic pole of the base yoke, a necessary clearance being provided between, the upper surface of the magnetic pole of the base yoke~~;~~ and~~,~~ a surface of the front yoke opposite to the upper surface of the magnetic pole of the base yoke, wherein the bone conduction device is characterized in that the clearance is produced

by a resilient element, which is disposed in an outer peripheral portion of the base yoke to receive the front yoke thereon.. Support for these amendments can be found in paragraphs [0007], [0008], [0014] and [0018] of the specification.

Thus, independent claims 1 and 7 have been amended to more clearly distinguish over the Examiner's asserted combination in that the relied upon reference fail to disclose, suggest or teach a bone conductive device comprising the above recited structure resulting in the reduction of complexity and in the thickness of the bone conductive device.

Rejections under "Official Notice"

Concerning the Examiners taking "official notice," in the official action, the Examiner took official notice as follows:

> Examiner takes official notice that various designs of the magnetic circuit are well known in the art. Speaker systems routinely adjust the components of the magnetic circuit depending on the requirements of the design. Speaker systems using ring magnets, plate magnets, or plug magnets are all well known, and their respective performance characteristics are all well known. Placement of the magnet inside the voice coil would have been obvious, with a minimal amount of experimentation, to one of ordinary skill in the art at the time of the invention.
>
> It would have been obvious to one of ordinary skill in the art at the time of the invention to use a magnetic circuit design with the magnet disposed inside the voice coil on the device taught by Hofer, depending on the requirements of the design

Applicants believe that the amendments have obviated not only the Examiners prior art rejections but also obviated the Examiner's reasoning based on specific information that is needed to support the obviousness rejection is obvious to one of ordinary skill in the or the taking of "official notice."

Claims 6 and 11 are directed toward a magnet disposed inside a voice coil. In the rejection, the Examiner cited "OFFICIAL NOTICE" that the "...various designs of the magnetic circuit are well known in the art. Speaker systems routinely adjust the components of the magnetic circuit depending on the requirements of the design. Speaker systems using ring magnets, plate magnets, or plug magnets are all well known, and their respective performance characteristics are all well known. Placement of the magnet inside the voice coil would have been obvious, with a minimal amount of experimentation, to one of ordinary skill in the art at the time of the invention."

The Applicant rejects the assertion that the "...various designs of the magnetic circuit are well

known in the art. Speaker systems routinely adjust the components of the magnetic circuit depending on the requirements of the design. Speaker systems using ring magnets, plate magnets, or plug magnets are all well known, and their respective performance characteristics are all well known. Placement of the magnet inside the voice coil would have been obvious, with a minimal amount of experimentation, to one of ordinary skill in the art at the time of the invention." The applicant asserts that the rejection is instead based on the Examiner's personal knowledge which constitutes IMPROPER hindsight reasoning and appears to be based upon the Applicant's own specification and the apparent inability of the Examiner to find references that disclose, suggest or teach each and every element of rejected claims 6 and 11

In that regard, as the Examiner knows, the Applicant respectfully requests removal of the improper "OFFICIAL NOTICE" rejections from claims 6 and 11, which either should be allowed for failing to establish a *prima facie* case of obviousness or be replaced with either a proper reference disclosing, suggesting or teaching a combination of ALL elements or the Examiner's declaration to establish his personal knowledge of the "...magnet being disposed inside said voice coil," as claimed by the Applicant for rebuttal, as is required by the MPEP. As the Examiner knows, the MPEP states that it would not be appropriate for the Examiner to take official notice of facts without citing a prior art reference where the facts asserted to be well known **are not capable of instant and unquestionable demonstration as being well-known**. For example, assertions of technical facts in the areas of esoteric technology or specific knowledge of the prior art must always be supported by citation to some reference work recognized as standard in the pertinent art. *In re Ahlert*, 424 F.2d at 1091, 165 USPQ at 420-21. See also *In re Grose*, 592 F.2d 1161, 1167-68, 201 USPQ 57, 63 (CCPA 1979)

New Independent Claims 12 and 13

Applicant has added new independent claims 12 and 13 with new independent claim 12 being a combination of amended claim 1 and amended claim 4 and new independent claim 13 being a combination of amended independent claim 7 and amended claim 9. Applicant believes that this particular combination of features is clearly not disclosed, suggested or taught by the applied reference and thus the Examiner can not make a prima facie case of either anticipation or obviousness with respect to the new independent claims. In that regard, applicant respectfully submits that the new independent claims (12 and 13) are clearly allowable and an action acknowledging same is

respectfully requested.

CONCLUSION

Based on the preceding arguments, Applicant respectfully believes that all pending claims and the entire application meet the acceptance criteria for allowance and therefore request favorable action. If the Examiner believes that anything further would be helpful to place the application in better condition for allowance, Applicant invites the Examiner to contact Applicant's representative at the telephone number listed below. The Director is hereby authorized to charge and/or credit Deposit Account 19-0153.

Date: December 22, 2008

Respectfully submitted,

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